

# West Nile Virus Newsletter

Zoonotic Disease Program, Washington State Department of Health

September 8, 2005

Volume 3, Issue 12

## Purpose

To keep our partners and other interested entities informed about West Nile virus.

## In This Issue

Washington goes WNV positive

Oregon reports first WNV human cases

Q&A on adulticiding with California experts

Journal articles from CDC's *Emerging Infectious Diseases*

National, northwest, and state surveillance

## Previous Issue

National, northwest, and state surveillance

First human case of WNV reported in Idaho

California WNV update

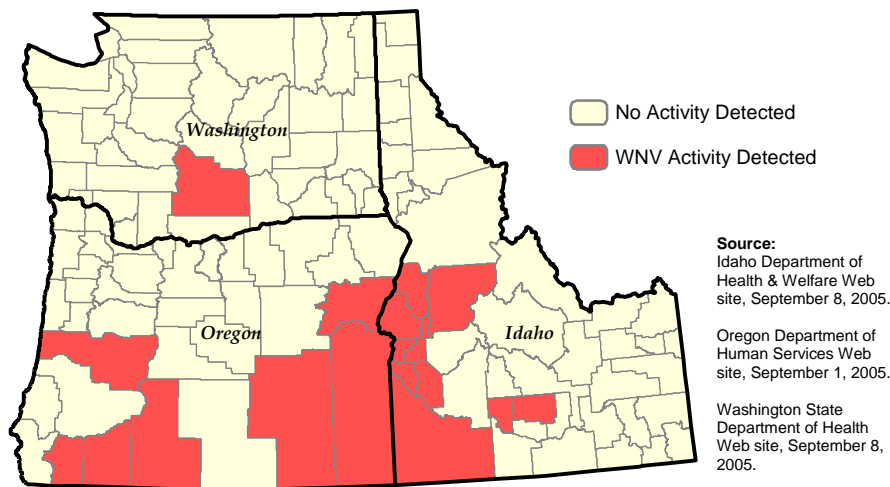
The rash of WNV infection

View the [August 24th](#) WNV Newsletter

## Subscribe, Submit Articles, Suggestions

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## West Nile virus activity in the Northwest



Washington reports its first West Nile virus activity of the year from a mosquito pool collected in Yakima County near the Benton County border. WNV activity has been detected progressing north along the west Idaho border into Adams and Valley County. Idaho reports forty-six horses, seventeen mosquito pools, nine birds, and three humans have been infected. Oregon reports WNV cases in nine birds, six horses, six mosquito pools, four sentinel chickens, and two humans.

## Benton County Mosquito Control District detects presence of West Nile virus in Yakima County

Testing by the Benton County Mosquito Control District has detected West Nile virus in one of its adult mosquito samples. This is the first positive WNV sample in the state since 2002. The district uses a variety of testing methods to monitor virus activity in much of Benton County and parts of Yakima County. The surveillance program is an early warning system for both the public and the Mosquito Control District.

The district uses sentinel chicken flocks, adult mosquitoes and birds to test for disease. Early detection benefits people by alerting them to the presence of virus and raising public awareness. It also benefits the district by providing additional information on where to focus abatement efforts.

James Henriksen, District Manager of Benton County Mosquito Control said, "Our disease monitoring program helps us better protect the community. It's an early warning system that directs us into the areas where known disease carrying mosquitoes are present so we can control them before they reach epidemic proportions."

## WNV Web Resources

Washington State  
Department of Health  
[www.doh.wa.gov/wnv](http://www.doh.wa.gov/wnv)

Centers for Disease  
Control and Prevention  
[www.cdc.gov/ncidod/dvb/id/westnile](http://www.cdc.gov/ncidod/dvb/id/westnile)

US Geological Survey &  
CDC ArboNET maps  
<http://westnilemaps.usgs.gov/index.html>

Cornell University,  
Environmental Risk  
Analysis Program  
<http://environmentalrisk.cornell.edu/WNV/>

Washington State  
University Cooperative  
Extension  
[www.wnv.wsu.edu](http://www.wnv.wsu.edu)

Washington State  
Department of  
Agriculture  
[www.agr.wa.gov/FoodAnimal/AnimalHealth/Diseases/WestNileVirus/default.htm](http://www.agr.wa.gov/FoodAnimal/AnimalHealth/Diseases/WestNileVirus/default.htm)

## Northwest Links

Idaho Department of  
Health & Welfare  
[www.westnile.idaho.gov](http://www.westnile.idaho.gov)

Oregon Department of  
Human Services  
<http://egov.oregon.gov/DHS/ph/acd/diseases/wnile/survey.shtml>

British Columbia Center  
for Disease Control  
[www.bccdc.org](http://www.bccdc.org)

Dr. Larry Jecha of the Benton-Franklin Health Department stated that, "This early detection means that we have West Nile virus in our eco-system. It is unknown how long it will take to become well established and see the effects on birds, horses and humans. This is a wake-up call that it is time to take protective measures seriously and avoid mosquito bites."

View the press release at <http://www.mosquitocontrol.org/pressreleases.html>.

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## Oregon reports first human WNV cases of the year

Oregon's first four cases of West Nile virus in humans were reported Wednesday afternoon, prompting state public health officials to advise residents to step up precautions against the infection.

The four cases affect residents of Lane and Malheur counties, both of whom are believed to have been bitten by mosquitoes in Oregon, and residents of Benton and Marion counties, both of whom reported being bitten while traveling in California's central valley.

Emilio DeBess, DVM, state public health veterinarian in the Oregon Department of Human Services, said three of the four people experienced symptoms and have since recovered. The fourth individual was found to be positive after giving blood in Lane County, had no symptoms and reported that he believed he was bitten by a mosquito in Josephine County. Lane County reported the case to the Lane Memorial Blood Bank, DeBess said.

The four cases first tested positive at the state public health laboratory in Portland, and were subsequently confirmed using U.S. Centers for Disease Control and Prevention testing procedures at a federally supported lab in Richmond, Calif. The Benton and Lane cases were in men, the Marion and Malheur cases in women. All three persons who experienced symptoms had fever and weakness, and one also developed a rash.

The news release is at <http://oregon.gov/DHS/news/2005news/2005-0831.shtml>.

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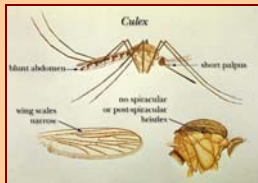
## California experts answer questions about adulticiding

West Nile virus activity in the central California region has activated mosquito control plans for adulticiding, which has prompted significant public concern. Experts from public health, agriculture, local mosquito control, and UC Davis have attempted to answer a wide variety of questions that were generated at a recent public meeting in the City of Davis.

If you represent an entity in Washington that could expect to receive questions from the public about adult mosquito control with the presence of WNV near or in your community, you are encouraged to view the questions posed to officials in the central region of California. Viewing these questions and answers could possibly help you and your community if faced with similar challenges.

View the Q&A at <http://www.city.davis.ca.us./story/?story=mosquitoquestions>.

## Mosquito Focus



CDC-PHIL

*Culex pipiens*, commonly called the northern house mosquito, is widespread in Washington and was probably introduced to the west coast of North America in the 1800's.

Although they occur in rural environments, they reach their greatest numbers in urban and suburban areas. Their flight range is about one mile and they will readily enter houses on warm evenings.

*Cx. pipiens* breed in catch basins, storm water ponds, clean and polluted ground pools, ditches, animal waste lagoons, log ponds and other waters rich in organic matter. This species also deposits eggs in artificial containers such as tin cans, tires, birdbaths, and other standing water.

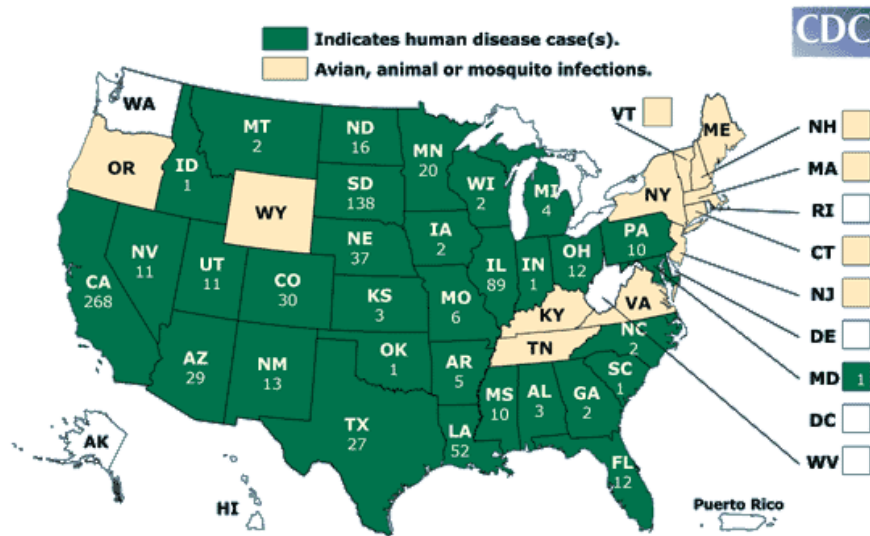
They primarily feed on birds, but will also feed on mammals, including humans and dogs.

The first WNV positive mosquito pool of *Cx. pipiens* was detected in Yakima County near the Benton County border. It is a species of concern for transmitting WNV because of its wide distribution, especially in highly populated areas.

It is also associated with the transmission of St. Louis encephalitis.

## West Nile virus activity in the United States

(Reported to CDC as of September 6, 2005)



As of September 6, 2005, a total of 32 states have published 821 human cases, compared with 1,191 cases from 36 states and NYC at this time in 2004.

**Human Clinical and Demographic Data:** In 2005, among 772 cases with available clinical and demographic data, the median age was 50 years (range: 3 months – 92 years), and 432 (56 percent) were in males. Of these 772 cases, 323 (42 percent) were neuroinvasive compared with 414 of 1,163 (36 percent) at this time in 2004. In 2005 there have been a total of 18 published WNV-related fatalities. Of these 18 fatalities clinical and demographic data were available on 16. The median age of these decedents was 80 years (range: 54 – 92 years).

National maps and data available at

<http://www.cdc.gov/ncidod/dvbid/westnile/surv&control.htm>.

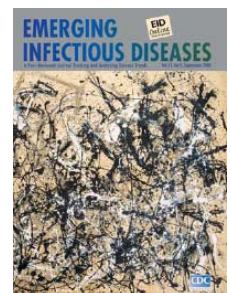
## Journal articles

*Centers for Disease Control and Prevention, Emerging Infectious Diseases, Volume 11, Number 9 – September Issue*

### Dead Crow Density and West Nile Virus Monitoring, New York, M. Eidson et al.

<http://www.cdc.gov/ncidod/eid/vol11no09/04-0712.htm>

**Abstract:** New York State used the health commerce system to monitor the number of WNV human disease cases and the density of dead crows. In each year from 2001 to 2003 and for the 3 years combined, persons living in New York counties (excluding New York City) with elevated weekly dead crow densities (above a threshold value of 0.1 dead crows per square mile) had higher risk (2.0–8.6 times) for disease caused by WNV within the next 2 weeks than residents of counties reporting fewer dead crows per square mile. This type of index can offer a real-time, relatively inexpensive window into viral activity in time for prevention and control. Changes in reporting, bird populations, and immunity may require that thresholds other than 0.1 be used in later years or in other areas.



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## Achieving Operational Hydrologic Monitoring of Mosquitoborne Disease,

J. Shaman and J.F. Day

<http://www.cdc.gov/ncidod/eid/vol11no09/05-0340.htm>

## Protective Behavior and West Nile Virus Risk, M. Loeb et al.

<http://www.cdc.gov/ncidod/eid/vol11no09/04-1184.htm>

## West Nile Virus–infected Mosquitoes, Louisiana Outbreak, 2002,

M.S. Godsey, Jr. et al.

<http://www.cdc.gov/ncidod/eid/vol11no09/04-0443.htm>

## Human West Nile Virus Isolation, Mexico, D. Elizondo-Quiroga et al.

<http://www.cdc.gov/ncidod/eid/vol11no09/05-0121.htm>

## Washington non-human surveillance summary

(Reported to DOH as of September 8, 2005)

County	Horses* <sup>†</sup>		Birds**		Sentinel Flocks***		Mosquito Pools****	
	Tested	Positive	Tested	Positive	Tested	Positive	Tested	Positive
Adams	0	0	1	0	0	0	0	0
Asotin	0	0	2	0	0	0	0	0
Benton	1	0	22	0	342	0	212	0
Chelan	0	0	3	0	0	0	0	0
Clallam	0	0	3	0	0	0	0	0
Clark	1	0	9	0	0	0	28	0
Columbia	0	0	0	0	0	0	0	0
Cowlitz	0	0	4	0	0	0	26	0
Douglas	0	0	1	0	0	0	0	0
Ferry	0	0	2	0	0	0	0	0
Franklin	0	0	2	0	0	0	71	0
Garfield	0	0	0	0	0	0	0	0
Grant	1	0	2	0	0	0	0	0
Grays Harbor	0	0	8	0	0	0	0	0
Island	1	0	35	0	0	0	0	0
Jefferson	0	0	8	0	0	0	7	0
King	2	0	81	0	0	0	0	0
Kitsap	0	0	0	0	0	0	71	0
Kittitas	0	0	5	0	0	0	0	0
Klickitat	1	0	4	0	0	0	0	0
Lewis	0	0	16	0	0	0	0	0
Lincoln	0	0	0	0	0	0	0	0
Mason	0	0	12	0	0	0	0	0
Okanogan	0	0	2	0	0	0	0	0
Pacific	0	0	1	0	0	0	0	0
Pend Oreille	1	0	0	0	0	0	0	0
Pierce	0	0	73	0	0	0	67	0
San Juan	1	0	1	0	0	0	0	0
Skagit	1	0	12	0	0	0	0	0
Skamania	0	0	1	0	0	0	0	0
Snohomish	6	0	43	0	0	0	0	0
Spokane	2	0	17	0	0	0	0	0
Stevens	3	0	5	0	0	0	0	0
Thurston	0	0	53	0	0	0	0	0
Wahkiakum	0	0	0	0	0	0	0	0
Walla Walla	1	0	6	0	0	0	0	0
Whatcom	1	0	11	0	0	0	0	0
Whitman	1	0	6	0	0	0	0	0
Yakima	1	0	13	0	90	0	158	1
<b>Totals</b>	<b>25</b>	<b>0</b>	<b>464</b>	<b>0</b>	<b>432</b>	<b>0</b>	<b>640</b>	<b>1</b>

\*A total of 33 horses have been tested for West Nile virus with negative results. Eight were not included in the table because county/state information was not available. WADDL Report Dated: August 31, 2005.

<sup>†</sup>WNV positive acquired in state.

\*\*A total of 477 birds have been submitted for West virus testing of which 13 birds were unsuitable and not tested for West Nile virus. USGS Report Date: August 30, 2005 and WADDL Report Date: August 30, 2005

\*\*\*Benton County MCD Report Dated: September 7, 2005

\*\*\*\* Mosquito pools tested by USACHPPM-West Report Date: September 2, 2005 (Week #26), Cowlitz County MCD Report Date: August 25, 2005, Benton MCD Report Date: September 7, 2005, Franklin MCD Report Date: August 24, 2005, and Clark MCD Report Date: August 18, 2005.